SEQUENCE LISTING

<110> German, Ira
Welch, Alice

<120> BETA-CAP73 CONTROL OF NORMAL AND ABNORMAL CELL MIGRATION

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<141> 2000-12-28

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gctgttagca acaagaaact aaatcctgtc t atg atg agc tgt tgg ttt tct    412
                                  Met Met Ser Cys Trp Phe Ser
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tgt gct cct aag aac aga caa gca gca gat tgg aac aaa tac gat gac   460
Cys Ala Pro Lys Asn Arg Gln Ala Ala Asp Trp Asn Lys Tyr Asp Asp
         10                  15                  20

cga ttg atg aga gca gca gaa agg gga gat gta gaa aaa gtg tcc tca   508
Arg Leu Met Arg Ala Ala Glu Arg Gly Asp Val Glu Lys Val Ser Ser
     25                  30                  35

atc ctt gct aaa aag gga gtc aat cca ggc aag cta gat gta gaa ggc   556
Ile Leu Ala Lys Lys Gly Val Asn Pro Gly Lys Leu Asp Val Glu Gly
 40                  45                  50                  55

aga tct gcc ttt cat gtt gtg gcc tca aag gga aat ctt gag tgt ttg   604
Arg Ser Ala Phe His Val Val Ala Ser Lys Gly Asn Leu Glu Cys Leu
                 60                  65                  70

aat gcc atc ctc ata cat gga gtt gat att aca acc agt gac acc gca   652
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Asn Ala Ile Leu Ile His Gly Val Asp Ile Thr Thr Ser Asp Thr Ala
            75                  80                  85

gga agg aat gct ctt cac ctg gct gca aag tat ggg cat gca ctg tgt   700
Gly Arg Asn Ala Leu His Leu Ala Ala Lys Tyr Gly His Ala Leu Cys
        90                  95                 100

cta caa aaa ctt cta cag tac aat tgt ccc act gaa cat gta gac ctg   748
Leu Gln Lys Leu Leu Gln Tyr Asn Cys Pro Thr Glu His Val Asp Leu
    105                 110                 115

cag gga aga act gca ctt cat gat gca gct atg gca gac tgt cct tct   796
Gln Gly Arg Thr Ala Leu His Asp Ala Ala Met Ala Asp Cys Pro Ser
120                 125                 130                 135

agc ata cag ctg ctc tgc gac cat ggg gcc tcg gtg aat gcc aaa gat   844
Ser Ile Gln Leu Leu Cys Asp His Gly Ala Ser Val Asn Ala Lys Asp
                140                 145                 150

gta gat ggg cgg aca cca ctt gtt ctg gct acc cag atg tgt agg cca   892
Val Asp Gly Arg Thr Pro Leu Val Leu Ala Thr Gln Met Cys Arg Pro
            155                 160                 165

aca ata tgt caa ctg ctg ata gat aga ggg gcg gat att aat tcc aga   940
Thr Ile Cys Gln Leu Leu Ile Asp Arg Gly Ala Asp Ile Asn Ser Arg
        170                 175                 180

gac aaa caa aac agg act gct ctc atg cta gga tgc gag tat ggt tgc   988
Asp Lys Gln Asn Arg Thr Ala Leu Met Leu Gly Cys Glu Tyr Gly Cys
    185                 190                 195

aaa gat gca gta gaa gtc tta atc aaa aac ggc gct gac gtg acc ttg   1036
Lys Asp Ala Val Glu Val Leu Ile Lys Asn Gly Ala Asp Val Thr Leu
200                 205                 210                 215

ctg gac gcc ctt ggc cat gac agt tct tac tat gca aga att ggt gac   1084
Leu Asp Ala Leu Gly His Asp Ser Ser Tyr Tyr Ala Arg Ile Gly Asp
                220                 225                 230

aat ctg gac att cta acc tta ctg aag act gca tca gaa aat tcc aac   1132
Asn Leu Asp Ile Leu Thr Leu Leu Lys Thr Ala Ser Glu Asn Ser Asn
            235                 240                 245

aaa ggg aga gaa ctt tgg aag aaa gga cca tct tta caa cag cga aat   1180
Lys Gly Arg Glu Leu Trp Lys Lys Gly Pro Ser Leu Gln Gln Arg Asn
        250                 255                 260

ttg tct cag atg cta gat gaa gta aat acg aag tca aat cag agg gag   1228
Leu Ser Gln Met Leu Asp Glu Val Asn Thr Lys Ser Asn Gln Arg Glu
    265                 270                 275

cat caa aac att cag gat ctg gag att gaa aat gaa gat ctg aaa gag   1276
His Gln Asn Ile Gln Asp Leu Glu Ile Glu Asn Glu Asp Leu Lys Glu
280                 285                 290                 295

aga ttg aga aaa att cag caa gaa cag aga ata tta ttg gat aaa gtc   1324
Arg Leu Arg Lys Ile Gln Gln Glu Gln Arg Ile Leu Leu Asp Lys Val
                300                 305                 310

aat ggt tta cag cta cag ctg aat gag gaa gta atg gtg gct gat gat   1372
Asn Gly Leu Gln Leu Gln Leu Asn Glu Glu Val Met Val Ala Asp Asp
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                315                 320                 325

ctg gaa agt gag aaa gaa aag ctg aag tcc ctt ttg gca gcc aaa gaa   1420
Leu Glu Ser Glu Lys Glu Lys Leu Lys Ser Leu Leu Ala Ala Lys Glu
        330                 335                 340

aag cag cat gaa gaa agc cta aga act att gag gct ctg aaa agt aga   1468
Lys Gln His Glu Glu Ser Leu Arg Thr Ile Glu Ala Leu Lys Ser Arg
    345                 350                 355

ttt aag tat ttt gag agt gat cat tta gga tca gga agt cat ttc agg   1516
Phe Lys Tyr Phe Glu Ser Asp His Leu Gly Ser Gly Ser His Phe Arg
360                 365                 370                 375

aaa gaa gat atg ctt ctt aaa caa ggt caa atg tac atg aca gac tca   1564
Lys Glu Asp Met Leu Leu Lys Gln Gly Gln Met Tyr Met Thr Asp Ser
                380                 385                 390

cag tgt act tcc aca ggc atg cca gtc cat atg caa agc cga tct atg   1612
Gln Cys Thr Ser Thr Gly Met Pro Val His Met Gln Ser Arg Ser Met
            395                 400                 405

tta aga cca ctg gag cta gcc tta cct aat caa gcc tca tat tcg gaa   1660
Leu Arg Pro Leu Glu Leu Ala Leu Pro Asn Gln Ala Ser Tyr Ser Glu
        410                 415                 420

aac gaa att tta aag aaa gaa tta gaa gca atg aga act ttc tgt gat   1708
Asn Glu Ile Leu Lys Lys Glu Leu Glu Ala Met Arg Thr Phe Cys Asp
    425                 430                 435

tca gca aaa caa gac aga ctc aaa ctc caa aat gaa ctg gct cac aag   1756
Ser Ala Lys Gln Asp Arg Leu Lys Leu Gln Asn Glu Leu Ala His Lys
440                 445                 450                 455

gtg gcg gag tgc aag gcc tta gca ttg gaa tgt gaa agg gtg aaa gag   1804
Val Ala Glu Cys Lys Ala Leu Ala Leu Glu Cys Glu Arg Val Lys Glu
                460                 465                 470

gat tca gat gag cag ata aag caa cta gaa gat gcc ttg aaa gac gtg   1852
Asp Ser Asp Glu Gln Ile Lys Gln Leu Glu Asp Ala Leu Lys Asp Val
            475                 480                 485

cag aag aga atg tat gag tcg gaa ggt aaa gtg aaa caa atg cag aca   1900
Gln Lys Arg Met Tyr Glu Ser Glu Gly Lys Val Lys Gln Met Gln Thr
        490                 495                 500

cat ttt ctt gcc ttg aaa gag cac ctg aca agt gat gcg gcc act ggg   1948
His Phe Leu Ala Leu Lys Glu His Leu Thr Ser Asp Ala Ala Thr Gly
    505                 510                 515

aac cac agg ctg atg gag gaa ctg aag gat cag ttg aaa gac atg aaa   1996
Asn His Arg Leu Met Glu Glu Leu Lys Asp Gln Leu Lys Asp Met Lys
520                 525                 530                 535

gtg aaa tac gaa ggt gcg tcc gca gaa gtg ggg aaa ttg aga aac caa   2044
Val Lys Tyr Glu Gly Ala Ser Ala Glu Val Gly Lys Leu Arg Asn Gln
                540                 545                 550

atc aaa caa aat gaa atg tta gtt gaa gag ttt aag aga gat gag ggc   2092
Ile Lys Gln Asn Glu Met Leu Val Glu Glu Phe Lys Arg Asp Glu Gly
            555                 560                 565
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aag ctg atg gaa gag aat aag cga ctg cag aag gag ttg agc atg tgt   2140
Lys Leu Met Glu Glu Asn Lys Arg Leu Gln Lys Glu Leu Ser Met Cys
        570                 575                 580

gaa ctg gag cga gag aag aga gga agg aag ctc act gag atg gaa ggc   2188
Glu Leu Glu Arg Glu Lys Arg Gly Arg Lys Leu Thr Glu Met Glu Gly
    585                 590                 595

cag tta aag gac ttg tca gcc aag ctg gcc ctt tct att cca gca gag   2236
Gln Leu Lys Asp Leu Ser Ala Lys Leu Ala Leu Ser Ile Pro Ala Glu
600                 605                 610                 615

aaa ttt gaa aac atg aag agc ttg tta tca aat gaa ctg aac gag aag   2284
Lys Phe Glu Asn Met Lys Ser Leu Leu Ser Asn Glu Leu Asn Glu Lys
                620                 625                 630

gca aaa aaa tta ata gat gtg gaa aga gaa tat gaa aga tca ctt aat   2332
Ala Lys Lys Leu Ile Asp Val Glu Arg Glu Tyr Glu Arg Ser Leu Asn
            635                 640                 645

gaa act aga cca tta aag aga gaa ctt gag aat ttg aag gcc aaa ctg   2380
Glu Thr Arg Pro Leu Lys Arg Glu Leu Glu Asn Leu Lys Ala Lys Leu
        650                 655                 660

gct cag cac gtc aaa cca gag gaa cat gag cag ctc aag agc aga tta   2428
Ala Gln His Val Lys Pro Glu Glu His Glu Gln Leu Lys Ser Arg Leu
    665                 670                 675

gag cag aag tca gga gaa ctt ggg aag agg atc act gag tta aca tcg   2476
Glu Gln Lys Ser Gly Glu Leu Gly Lys Arg Ile Thr Glu Leu Thr Ser
680                 685                 690                 695

aaa aat cag acg tta caa aag gaa atc gaa aag gtc tgc ctg gat aat   2524
Lys Asn Gln Thr Leu Gln Lys Glu Ile Glu Lys Val Cys Leu Asp Asn
                700                 705                 710

aag ctc ctt aca caa caa gta aat aac tta aca act gaa atg aaa aat   2572
Lys Leu Leu Thr Gln Gln Val Asn Asn Leu Thr Thr Glu Met Lys Asn
            715                 720                 725

gtc cct tta aaa gta agt gaa gaa atg aaa aag tca cat gat gta att   2620
Val Pro Leu Lys Val Ser Glu Glu Met Lys Lys Ser His Asp Val Ile
        730                 735                 740

gtt gat gat ttg aat aaa aag ctt tca gat gtg aca cac aaa tat aca   2668
Val Asp Asp Leu Asn Lys Lys Leu Ser Asp Val Thr His Lys Tyr Thr
    745                 750                 755

gaa aag aag ttg gaa atg gag aag ttg ctt atg gaa aat gcc agt tta   2716
Glu Lys Lys Leu Glu Met Glu Lys Leu Leu Met Glu Asn Ala Ser Leu
760                 765                 770                 775

agt aaa aat gtc agc cgc ctg gaa act gtg ttc ata cct ccc gag aga   2764
Ser Lys Asn Val Ser Arg Leu Glu Thr Val Phe Ile Pro Pro Glu Arg
                780                 785                 790

cac gaa aaa gaa atg atg gct ctg aaa tcc aat atc act gaa ctt aag   2812
His Glu Lys Glu Met Met Ala Leu Lys Ser Asn Ile Thr Glu Leu Lys
            795                 800                 805
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aag cag ctg tct gaa ctt aat aaa aaa tgt ggt gaa gac caa gag aaa   2860
Lys Gln Leu Ser Glu Leu Asn Lys Lys Cys Gly Glu Asp Gln Glu Lys
        810                 815                 820

ata tat tca ctc atg tct gaa aac aat gat ttg aaa aag acc atg agt   2908
Ile Tyr Ser Leu Met Ser Glu Asn Asn Asp Leu Lys Lys Thr Met Ser
    825                 830                 835

cat cag tat gtg ccc gtg aaa acc cat gaa gag att aaa act gcc ttg   2956
His Gln Tyr Val Pro Val Lys Thr His Glu Glu Ile Lys Thr Ala Leu
840                 845                 850                 855

agt agc aca ttg gat aaa acc aat aga gaa tta gta gat gtg aag aag   3004
Ser Ser Thr Leu Asp Lys Thr Asn Arg Glu Leu Val Asp Val Lys Lys
                860                 865                 870

aag tgt gaa gat ata aat caa gaa ttt gtg aaa ata aaa gat gag aac   3052
Lys Cys Glu Asp Ile Asn Gln Glu Phe Val Lys Ile Lys Asp Glu Asn
            875                 880                 885

gaa ata tta aaa aga aat ctg gag aac act cag aac caa gta aaa gct   3100
Glu Ile Leu Lys Arg Asn Leu Glu Asn Thr Gln Asn Gln Val Lys Ala
        890                 895                 900

gag tac atc agc cta aga gag cat gaa gaa aag atg agt ggc cta agg   3148
Glu Tyr Ile Ser Leu Arg Glu His Glu Glu Lys Met Ser Gly Leu Arg
    905                 910                 915

aag agc atg aag aag gtc cag gac aac agc gct gaa ata ctg gct aag   3196
Lys Ser Met Lys Lys Val Gln Asp Asn Ser Ala Glu Ile Leu Ala Lys
920                 925                 930                 935

tac aaa aaa agc cag gag gag att gtc acc ctg cat gag gag att gca   3244
Tyr Lys Lys Ser Gln Glu Glu Ile Val Thr Leu His Glu Glu Ile Ala
            940                 945                 950

gcc cag aag aga gaa ctc gac acg ata cag gaa tgc atc aag cta aaa   3292
Ala Gln Lys Arg Glu Leu Asp Thr Ile Gln Glu Cys Ile Lys Leu Lys
        955                 960                 965

tat gct ccg atc atc agc ttg gaa gag tgt gag aga aaa ttt aaa gcc   3340
Tyr Ala Pro Ile Ile Ser Leu Glu Glu Cys Glu Arg Lys Phe Lys Ala
    970                 975                 980

act gag aaa gaa cta aaa gaa cag cta tcc cag cag aca cag aag tat   3388
Thr Glu Lys Glu Leu Lys Glu Gln Leu Ser Gln Gln Thr Gln Lys Tyr
985                 990                 995

aat  acc agt gaa gaa gag  gcc aag aag tgc aag  caa gag aat gac aag   3436
Asn  Thr Ser Glu Glu Glu  Ala Lys Lys Cys Lys  Gln Glu Asn Asp Lys
1000                1005                1010                1015

tta aag aag gag atc  ctc act ctt cag aag  gat cta aag gat aag  aat   3484
Leu Lys Lys Glu Ile  Leu Thr Leu Gln Lys  Asp Leu Lys Asp Lys  Asn
                1020                1025                1030

gtt cac att gag  aat tct tat gaa aca  gaa aga gca tta agc  aga aaa   3532
Val His Ile Glu  Asn Ser Tyr Glu Thr  Glu Arg Ala Leu Ser  Arg Lys
            1035                1040                1045

aca gaa gag  ctg aac aga cag tta  aaa gac ctg ttg cag  aaa tac aca   3580
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Thr Glu Glu  Leu Asn Arg Gln Leu  Lys Asp Leu Leu Gln  Lys Tyr Thr
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gag gca  aag aag gag aaa gag  aag ctc gtg gag gaa  aat gcc aag cag   3628
Glu Ala  Lys Lys Glu Lys Glu  Lys Leu Val Glu Glu  Asn Ala Lys Gln
    1065                1070                1075

act  tct gag atc ctt gca  gca caa act ctt ttg  cag aag cag cat gtt   3676
Thr  Ser Glu Ile Leu Ala  Ala Gln Thr Leu Leu  Gln Lys Gln His Val
1080                1085                1090                1095

ccg ctg gag cag gtt  gag tcc ctg aaa aaa  tct ctt agt ggt aca  atc   3724
Pro Leu Glu Gln Val  Glu Ser Leu Lys Lys  Ser Leu Ser Gly Thr  Ile
                1100                1105                1110

gag aca ctc aag  gaa gaa ctg aaa act  aag cag aga tgt tat  gag aaa   3772
Glu Thr Leu Lys  Glu Glu Leu Lys Thr  Lys Gln Arg Cys Tyr  Glu Lys
            1115                1120                1125

gag cag cag  aca gtg acc caa ctg  cgg cag atg ctg gag  aat cag aag   3820
Glu Gln Gln  Thr Val Thr Gln Leu  Arg Gln Met Leu Glu  Asn Gln Lys
        1130                1135                1140

aac tcc  tct gtg ccc ctg gct  gag cat ttg cag gtt  aag gaa gca ttt   3868
Asn Ser  Ser Val Pro Leu Ala  Glu His Leu Gln Val  Lys Glu Ala Phe
    1145                1150                1155

gag  aaa gaa gtt gga atc  ata aaa gct agc ttg  aga gaa aag gaa gaa   3916
Glu  Lys Glu Val Gly Ile  Ile Lys Ala Ser Leu  Arg Glu Lys Glu Glu
1160                1165                1170                1175

gaa agc caa aac aaa  act gaa gag gtc tcc  aaa ctc cag tct gag  att   3964
Glu Ser Gln Asn Lys  Thr Glu Glu Val Ser  Lys Leu Gln Ser Glu  Ile
                1180                1185                1190

cag aat act aaa  caa gcg tta aaa aaa  tta gag act cgg gag  gtg gtt   4012
Gln Asn Thr Lys  Gln Ala Leu Lys Lys  Leu Glu Thr Arg Glu  Val Val
            1195                1200                1205

gat ttg tcg  aaa tat aaa gca acg  aaa agc gat ttg gag  aca cag att   4060
Asp Leu Ser  Lys Tyr Lys Ala Thr  Lys Ser Asp Leu Glu  Thr Gln Ile
        1210                1215                1220

tcc gac tta aac gaa aaa ttg gcc aat ctg aat agg aag tat gag gaa   4108
Ser Asp Leu Asn Glu Lys Leu Ala Asn Leu Asn Arg Lys Tyr Glu Glu
    1225                1230                1235

gta tgt gag gag gtt ttg cat gcc aaa aag aag gaa ctg tct gct aaa   4156
Val Cys Glu Glu Val Leu His Ala Lys Lys Lys Glu Leu Ser Ala Lys
1240                1245                1250                1255

gat gag aag gaa ttg ctc cat ttc agc ata gag caa gaa atc aaa gat   4204
Asp Glu Lys Glu Leu Leu His Phe Ser Ile Glu Gln Glu Ile Lys Asp
                1260                1265                1270

cag cag gaa cga tgt gac aaa tcc tta aca acc atc acg gag cta cag   4252
Gln Gln Glu Arg Cys Asp Lys Ser Leu Thr Thr Ile Thr Glu Leu Gln
            1275                1280                1285

aga aga ata cag gaa tct gcc aaa caa atc gaa gca aaa gat aat aag   4300
Arg Arg Ile Gln Glu Ser Ala Lys Gln Ile Glu Ala Lys Asp Asn Lys
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        1290                1295                1300

ata act gaa ctg ctc aat gat gtg gag aga tta aaa cag gcc ctc aat   4348
Ile Thr Glu Leu Leu Asn Asp Val Glu Arg Leu Lys Gln Ala Leu Asn
    1305                1310                1315

ggc ctt tcc cag ctc acc tat gga agt ggg agt ccc agc aag agg cag   4396
Gly Leu Ser Gln Leu Thr Tyr Gly Ser Gly Ser Pro Ser Lys Arg Gln
1320                1325                1330                1335

agt cag ctg att gac agc ctg cag cag cag gtc agg tcc ctg cag cag   4444
Ser Gln Leu Ile Asp Ser Leu Gln Gln Gln Val Arg Ser Leu Gln Gln
                1340                1345                1350

cag ctg gcg gat gcc gac aga cag cac caa gaa gta att gca att tat   4492
Gln Leu Ala Asp Ala Asp Arg Gln His Gln Glu Val Ile Ala Ile Tyr
            1355                1360                1365

cgg aca cac ctt ctt agt gct gca cag ggt cac atg gat gag gat gtg   4540
Arg Thr His Leu Leu Ser Ala Ala Gln Gly His Met Asp Glu Asp Val
        1370                1375                1380

cag gcc gcc tta ctg cag atc ata cag atg cgg cag ggg ctc gtg tgc   4588
Gln Ala Ala Leu Leu Gln Ile Ile Gln Met Arg Gln Gly Leu Val Cys
    1385                1390                1395

tag tcg gca ccccccagcc cacagtggct ttccctgctg gtgctgagca           4637
 *  Ser Ala
    1400

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Asp Val Glu Lys Val Ser Ser Ile Leu Ala Lys Lys Gly Val Asn Pro
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Gly Lys Leu Asp Val Glu Gly Arg Ser Ala Phe His Val Val Ala Ser
    50                  55                  60
Lys Gly Asn Leu Glu Cys Leu Asn Ala Ile Leu Ile His Gly Val Asp
65                  70                  75                  80
Ile Thr Thr Ser Asp Thr Ala Gly Arg Asn Ala Leu His Leu Ala Ala
                85                  90                  95
Lys Tyr Gly His Ala Leu Cys Leu Gln Lys Leu Leu Gln Tyr Asn Cys
            100                 105                 110
Pro Thr Glu His Val Asp Leu Gln Gly Arg Thr Ala Leu His Asp Ala
        115                 120                 125
Ala Met Ala Asp Cys Pro Ser Ser Ile Gln Leu Leu Cys Asp His Gly
    130                 135                 140
Ala Ser Val Asn Ala Lys Asp Val Asp Gly Arg Thr Pro Leu Val Leu
145                 150                 155                 160
Ala Thr Gln Met Cys Arg Pro Thr Ile Cys Gln Leu Leu Ile Asp Arg
                165                 170                 175
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Gly Ala Asp Ile Asn Ser Arg Asp Lys Gln Asn Arg Thr Ala Leu Met
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Leu Gly Cys Glu Tyr Gly Cys Lys Asp Ala Val Glu Val Leu Ile Lys
        195                 200                 205
Asn Gly Ala Asp Val Thr Leu Leu Asp Ala Leu Gly His Asp Ser Ser
    210                 215                 220
Tyr Tyr Ala Arg Ile Gly Asp Asn Leu Asp Ile Leu Thr Leu Leu Lys
225                 230                 235                 240
Thr Ala Ser Glu Asn Ser Asn Lys Gly Arg Glu Leu Trp Lys Lys Gly
                245                 250                 255
Pro Ser Leu Gln Gln Arg Asn Leu Ser Gln Met Leu Asp Glu Val Asn
            260                 265                 270
Thr Lys Ser Asn Gln Arg Glu His Gln Asn Ile Gln Asp Leu Glu Ile
        275                 280                 285
Glu Asn Glu Asp Leu Lys Glu Arg Leu Arg Lys Ile Gln Gln Glu Gln
    290                 295                 300
Arg Ile Leu Leu Asp Lys Val Asn Gly Leu Gln Leu Gln Leu Asn Glu
305                 310                 315                 320
Glu Val Met Val Ala Asp Asp Leu Glu Ser Glu Lys Glu Lys Leu Lys
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Ser Leu Leu Ala Ala Lys Glu Lys Gln His Glu Glu Ser Leu Arg Thr
            340                 345                 350
Ile Glu Ala Leu Lys Ser Arg Phe Lys Tyr Phe Glu Ser Asp His Leu
        355                 360                 365
Gly Ser Gly Ser His Phe Arg Lys Glu Asp Met Leu Leu Lys Gln Gly
    370                 375                 380
Gln Met Tyr Met Thr Asp Ser Gln Cys Thr Ser Thr Gly Met Pro Val
385                 390                 395                 400
His Met Gln Ser Arg Ser Met Leu Arg Pro Leu Glu Leu Ala Leu Pro
                405                 410                 415
Asn Gln Ala Ser Tyr Ser Glu Asn Glu Ile Leu Lys Lys Glu Leu Glu
            420                 425                 430
Ala Met Arg Thr Phe Cys Asp Ser Ala Lys Gln Asp Arg Leu Lys Leu
        435                 440                 445
Gln Asn Glu Leu Ala His Lys Val Ala Glu Cys Lys Ala Leu Ala Leu
    450                 455                 460
Glu Cys Glu Arg Val Lys Glu Asp Ser Asp Glu Gln Ile Lys Gln Leu
465                 470                 475                 480
Glu Asp Ala Leu Lys Asp Val Gln Lys Arg Met Tyr Glu Ser Glu Gly
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Lys Val Lys Gln Met Gln Thr His Phe Leu Ala Leu Lys Glu His Leu
            500                 505                 510
Thr Ser Asp Ala Ala Thr Gly Asn His Arg Leu Met Glu Glu Leu Lys
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Asp Gln Leu Lys Asp Met Lys Val Lys Tyr Glu Gly Ala Ser Ala Glu
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545                 550                 555                 560
Glu Phe Lys Arg Asp Glu Gly Lys Leu Met Glu Glu Asn Lys Arg Leu
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Gln Lys Glu Leu Ser Met Cys Glu Leu Glu Arg Glu Lys Arg Gly Arg
            580                 585                 590
Lys Leu Thr Glu Met Glu Gly Gln Leu Lys Asp Leu Ser Ala Lys Leu
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Ala Leu Ser Ile Pro Ala Glu Lys Phe Glu Asn Met Lys Ser Leu Leu
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Ser Asn Glu Leu Asn Glu Lys Ala Lys Lys Leu Ile Asp Val Glu Arg
625                 630                 635                 640
Glu Tyr Glu Arg Ser Leu Asn Glu Thr Arg Pro Leu Lys Arg Glu Leu
                645                 650                 655
Glu Asn Leu Lys Ala Lys Leu Ala Gln His Val Lys Pro Glu Glu His
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Glu Gln Leu Lys Ser Arg Leu Glu Gln Lys Ser Gly Glu Leu Gly Lys
675 680 685
Arg Ile Thr Glu Leu Thr Ser Lys Asn Gln Thr Leu Gln Lys Glu Ile
690 695 700
Glu Lys Val Cys Leu Asp Asn Lys Leu Leu Thr Gln Gln Val Asn Asn
705 710 715 720
Leu Thr Thr Glu Met Lys Asn Val Pro Leu Lys Val Ser Glu Glu Met
725 730 735
Lys Lys Ser His Asp Val Ile Val Asp Asp Leu Asn Lys Lys Leu Ser
740 745 750
Asp Val Thr His Lys Tyr Thr Glu Lys Lys Leu Glu Met Glu Lys Leu
755 760 765
Leu Met Glu Asn Ala Ser Leu Ser Lys Asn Val Ser Arg Leu Glu Thr
770 775 780
Val Phe Ile Pro Pro Glu Arg His Glu Lys Glu Met Met Ala Leu Lys
785 790 795 800
Ser Asn Ile Thr Glu Leu Lys Lys Gln Leu Ser Glu Leu Asn Lys Lys
805 810 815
Cys Gly Glu Asp Gln Glu Lys Ile Tyr Ser Leu Met Ser Glu Asn Asn
820 825 830
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Val Lys Ile Lys Asp Glu Asn Glu Ile Leu Lys Arg Asn Leu Glu Asn
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Thr Gln Asn Gln Val Lys Ala Glu Tyr Ile Ser Leu Arg Glu His Glu
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Glu Lys Met Ser Gly Leu Arg Lys Ser Met Lys Lys Val Gln Asp Asn
915 920 925
Ser Ala Glu Ile Leu Ala Lys Tyr Lys Lys Ser Gln Glu Glu Ile Val
930 935 940
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945 950 955 960
Gln Glu Cys Ile Lys Leu Lys Tyr Ala Pro Ile Ile Ser Leu Glu Glu
965 970 975
Cys Glu Arg Lys Phe Lys Ala Thr Glu Lys Glu Leu Lys Glu Gln Leu
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Ser Gln Gln Thr Gln Lys Tyr Asn Thr Ser Glu Glu Glu Ala Lys Lys
995 1000 1005
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Gln Glu Val Ile Ala Ile Tyr Arg Thr His Leu Leu Ser Ala Ala Gln
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<223> Xaa may be Val or Ile

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